DC-8 10/27/16 - 10/28/16

Aircraft: DC-8 - AFRC (See full schedule)
Flight Number: 1148
Payload Configuration: OIB-ATM NAV/ATM GPS/ATM-T5/T6/ATM FLIR/ATM CAMBOT MCoRDS/SNOW/Ku RADAR DMS/POS-AV GP
Nav Data Collected: Yes
Total Flight Time: 11.5 hours
Submitted by: Chris Jennison on 10/29/16
Flight Segments:

From:	SCCI	**To:**	SCCI
Start:	10/27/16 12:47 Z	**Finish:**	10/28/16 00:18 Z
Flight Time:	11.5 hours		
Log Number:	178010	**PI:**	Nathan Kurtz
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	This was the Seelye Loop, a Weddell sea ice pattern named after longtime researcher Seelye Martin. Low clouds impaired some of the flight forcing altitude adjustments. Like many of the sea ice flights there were sightings of some wildlife (seals and the penguins they were dining on).		

Flight Hour Summary:

	178010
Flight Hours Approved in SOFRS	300
Total Used	306.9
Total Remaining	-6.9

178010 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
10/04/16	1135	Science	4	4	296	
10/05/16	1136	Science	2.7	6.7	293.3	
10/12/16	1138	Transit	10.9	17.6	282.4	
10/12/16	1139	Transit	3	20.6	279.4	
10/14/16 - 10/15/16	1140	Science	10.9	31.5	268.5	
10/15/16 - 10/16/16	1141	Science	11.8	43.3	256.7	
10/17/16 - 10/18/16	1142	Science	11.8	55.1	244.9	
10/20/16 - 10/21/16	1143	Science	11.4	66.5	233.5	
10/22/16	1144	Science	11	77.5	222.5	
10/24/16 - 10/25/16	1145	Science	11.5	89	211	
10/25/16 - 10/26/16	1146	Science	11.3	100.3	199.7	
10/26/16 - 10/27/16	1147	Science	12.1	112.4	187.6	
10/27/16 - 10/28/16	1148	Science	11.5	123.9	176.1	
10/28/16 - 10/29/16	1149	Science	11	134.9	165.1	
10/31/16 - 11/01/16	1150	Science	11	145.9	154.1	

11/02/16 - 11/03/16	1151	Science	11.2	157.1	142.9
11/03/16 - 11/04/16	1152	Science	11.5	168.6	131.4
11/04/16 - 11/05/16	1153	Science	11.1	179.7	120.3
11/05/16 - 11/06/16	1154	Science	11.7	191.4	108.6
11/07/16 - 11/08/16	1155	Science	11.2	202.6	97.4
11/09/16 - 11/10/16	1156	Science	11.7	214.3	85.7
11/10/16	1157	Science	10.9	225.2	74.8
11/11/16 - 11/12/16	1158	Science	11.3	236.5	63.5
11/12/16 - 11/13/16	1159	Science	11.1	247.6	52.4
11/14/16	1160	Science	10.9	258.5	41.5
11/15/16 - 11/16/16	1161	Science	11.6	270.1	29.9
11/17/16 - 11/18/16	1162	Science	11.1	281.2	18.8
11/18/16 - 11/19/16	1163	Science	11.1	292.3	7.7
11/21/16	1165	Transit	11.6	303.9	-3.9
11/21/16	1164	Transit	3	306.9	-6.9

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

Related Science Report:

OIB - DC-8 10/28/16 Science Report

Mission: OIB
Mission Summary:

OIB completed the high priority Hull-Land 1 flight. Weather for the flight was excellent with 100% data collection over the survey area as well as high altitude data over prior LVIS lines acquired on the transit over the Getz Ice Shelf. This flight is a new mission, one of a suite of five missions designed to map the coastal region encompassing the Hull and Land glaciers and surrounding areas to the west of the Getz Ice Shelf. This flight is the outboard-most of the five planned flights.

The MiniRad piggyback instrument was also flown on this mission and looked to have successfully collected about 0.5 Gb of data.

Data volumes
ATM: T5: 19 Gb T6: 14 Gb
FLIR: 7 Gb
Cambot: 8 Gb
DMS: 37 Gb
Snow/Ku radars: 205 Gb each
MCoRDS: 973 Gb
AIRGrav: 5 Gb
data on: 1641 (high altitude) 1713 (low altitude)
data off: 1925 (low altitude) 2005 (high altitude)

File:
hull_land_map.pdf
Submitted by: Nathan T. Kurtz on 10/28/16

OIB - DC-8 10/27/16 Science Report

Mission: OIB
Mission Summary:

OIB completed the baseline priority Seelye Loop mission in the Weddell Sea. This mission represents a continuation of the IceBridge time series, repeating the 24 October 2009, 26 October 2010, 12 October 2011 and 25 October 2011 missions. It targets gradients in sea ice freeboard and thickness along the “gate” connecting the tip of the Antarctic Peninsula with Cape Norvegia.

Weather for the mission turned out much better than expected from forecasts. Clouds were present at the eastern edge of the line, though they were thin enough for ATM to range through. Overall, there was near 100% data coverage with only a small amount of data lost during a few transition periods to lower altitude to get under clouds. The end of the line was cut short about 200 nm due to fuel constraints, though ATM and DMS collected some high altitude data during the climb out.

The gravimeter was not operated on this flight due to a failure of the generators the prior night. The newly installed ATM Applanix system also failed shortly after take-off, though other systems are on board to mitigate impact to the mission.

The MiniRad piggyback instrument was also flown on this mission and looked to have successfully collected about 0.5 Gb of good data.

Data volumes
ATM: T5: 35 Gb T6: 39 Gb
FLIR: 15 Gb
Cambot: 15 Gb
DMS: 121 Gb
Snow/Ku radars: 389 Gb each
MCoRDS: Did not collect (sea ice)
AIRGrav: Inoperable due to generator malfunction
data on: 1445
data off: 2150

File:
seelye_loop_map.pdf
Submitted by: Nathan T. Kurtz on 10/27/16

Page Last Updated: April 22, 2017

Page Editor: Brad Bulger

NASA Official: Bruce A. Tagg
